Harpers Ferry National Historical Park

National Park Service
U.S. Department of the Interior

Community Bulletin


Gypsy Moth - Caterpillar Stage


Gypsy Moth - Male


Gypsy Moth - Female

Harpers Ferry Park Proposes to Control Gypsy Moth in 2008

The Harpers Ferry National Historical Park is proposing to control gypsy moth populations this spring in areas of the Park where heavy defoliation is expected to occur. The proposal is based on an aerial survey to detect gypsy moth-caused tree defoliation and a Biological Evaluation of Gypsy Moth both completed by the U.S. Department of Agriculture in 2007. The aerial survey conducted on June 11, 2007 showed that 215 acres of heavy defoliation occurred. The majority of the defoliation occurred on Maryland Heights and Short Hill with smaller patches of defoliation on Loudoun Heights. The Biological Evaluation of Gypsy Moth, dated October 2007, reports gypsy moth populations at the Park are healthy, building and sufficient to cause 1615 acres of heavy defoliation in 2008.

Defoliation caused by gypsy moth caterpillars stresses and weakens trees leaving them more susceptible to secondary infections and infestations and other cumulative impacts. Direct and indirect stresses of gypsy moth infestation weaken and eventually kill some forest trees. This in turn would have adverse effects on water quality, wildlife and habitat, rare plants, visitor use and experience, safety, the cultural landscape, and wildland fire fuel load. The purpose of the proposal is to prevent or minimize these adverse affects to the environment by reducing gypsy moth populations and providing foliage in the park.

The public is invited to direct concerns or comments regarding this proposal to the Park's Natural Resource Manager. You can call the Resource Manager at (304) 535-6038, send an email to bill_hebb@nps.gov, or write to him at Harpers Ferry National Historical Park, P.O. Box 65, Harpers Ferry, WV 25425. Comments should be received by February 15, 2008.

Following the receipt of comments, an environmental assessment will be prepared describing the alternatives considered to control gypsy moth and their environmental impacts. A press release will be issued when the draft assessment is available for public review.

Life Cycle of the Gypsy Moth

EGG STAGE

Most of the life cycle of the gypsy moth is spent in the egg stage. Weather effects the exact time of egg laying and spring hatch. An individual egg mass may contain anywhere from 100 to 1,200 eggs.

HATCH STAGE

The timing of the hatch is effected by warm weather in the spring. Once the hatch begins most eggs hatch within a week. Larvae start out only 1/8 inch at hatch and end up about 2 to 3 inches long. After they hatch they move up into the tree producing a thin line of silk behind them. When the wind blows it picks up the thread and the young larvae attached to it. This is how the larva move to other locations. This is called 'ballooning' and is the way gypsy moth larva spread from tree to tree.

LARVAL STAGE

Young larvae feed during the day, in the morning and then again in the late afternoon. When they rest they can be found underneath the leaves. As they grow older they change to eating at night and resting during the day. They tend to move up the tree as evening approaches and back down the tree in the early morning. They do this to find a cool, shaded location in which to spend the heat of the day.

PUPATION STAGE

When the larval stage is over the caterpillar sheds its larval 'skin'. Within an hour the pupa turns from white with a greenish cast to brown. This teardrop shaped structure ends up attached to whatever the larvae was on when it shed its skin. The process of changing into a moth takes approximately 2 weeks (16 - 17 days for the female).

ADULT STAGE

The adult emerges in Mid-July to early August. When they emerge they already contain eggs or sperm and are ready to mate. The female is white to cream colored with black markings. The male is a mottled brown color with black wing markings and broad, feathery antennae. These antennae are used to locate the female moth which gives off a chemical to help the male locate the female. The adult form does not feed and usually lives only about a week.

EGG LAYING STAGE

The female Gypsy Moth cannot fly and so their eggs are laid close to where they hatch. The eggs are covered by a dense coating of hairs from the female. Because of the hairs the egg mass is a dark tan to light brown in the summer. Later in the year they look more light tan to gray in color.